### Message

From: Schechter, Kathryn [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=01463F1326694474BD56343BFAC423D7-SCHECHTER, KATHRYN]

**Sent**: 2/11/2021 2:45:09 PM

To: Nazef, Laura [Nazef, Laura@epa.gov]; Lloyd, Tyler [Lloyd, Tyler@epa.gov]

Subject: RE: EPA ORD-MPART Call on PFAS Destruction (Feb. 25)

Yes, I should be able to make it. Can you add Tristan Butler as well? We are trying to train another ICB person on PFAS...

# Kathy

Dr. Kathy Schechter Chemist, Industrial Chemistry Branch (MC-7406M) 1201 Constitution Ave., NW Washington, DC 20460 Telephone: (202) 564-8589 Fax: (202) 564-8679

From: Nazef, Laura < Nazef. Laura@epa.gov> Sent: Thursday, February 11, 2021 9:27 AM

To: Lloyd, Tyler <Lloyd.Tyler@epa.gov>; Schechter, Kathryn <Schechter.Kathryn@epa.gov>

Subject: RE: EPA ORD-MPART Call on PFAS Destruction (Feb. 25)

Thanks Tyler.

Kathy, are you available to participate in a call that ORD is having with the Michigan PFAS Action Response Team (MPACT) on February 25 at 10? They will be discussing how EPA programs are defining PFAS, among other topics.

See below for more information.

Thanks, Laura

From: Lloyd, Tyler < Lloyd.Tyler@epa.gov > Sent: Thursday, February 11, 2021 7:44 AM To: Nazef, Laura < Nazef. Laura@epa.gov >

Subject: RE: EPA ORD-MPART Call on PFAS Destruction (Feb. 25)

Laura,

I am unavailable at this time. However, I would see if Kathryn Schechter is available. She is chemist in ICB and my go-to-person for determining the classification of PFAS substances.

-Tyler

## Tyler Edward Lloyd

Environmental Protection Specialist U.S. Environmental Protection Agency Office of Pollution Prevention and Toxics Chemical Control Division Tel (202) 564-4016

A Please do not print this email unless absolutely necessary A

From: Nazef, Laura < Nazef. Laura@epa.gov > Sent: Wednesday, February 10, 2021 3:03 PM

To: Lloyd, Tyler < Lloyd. Tyler@epa.gov>

Subject: FW: EPA ORD-MPART Call on PFAS Destruction (Feb. 25)

Hi Tyler,

Would you be able to participate in this call for OPPT? I don't think I'm the right person.

Thanks, Laura

From: Matthews, Lisa < Matthews.Lisa@epa.gov > Sent: Wednesday, February 10, 2021 3:00 PM

To: Nazef, Laura <Nazef.Laura@epa.gov>; Richard, Ann <Richard.Ann@epa.gov>; Mills, Marc <mills.marc@epa.gov>

Cc: McCabe, Erin <mccabe.erin@epa.gov>; Williams, Antony <Williams.Antony@epa.gov>; Patlewicz, Grace

<<u>Patlewicz.Grace@epa.gov</u>>; Lloyd, Tyler <<u>Lloyd.Tyler@epa.gov</u>> **Subject:** RE: EPA ORD-MPART Call on PFAS Destruction (Feb. 25)

Laura and Tony,

Would you be willing to speak to this issue on our call with MPART on Feb 25 from 10-11 AM? These are technical exchanges by EPA and MPART. We have a couple of other agenda topics in the works.

Thank you, Lisa Matthews

From: Nazef, Laura < Nazef.Laura@epa.gov > Sent: Wednesday, February 10, 2021 2:55 PM

**To:** Richard, Ann < Richard.Ann@epa.gov>; Matthews, Lisa < Matthews.Lisa@epa.gov>; Mills, Marc

<mills.marc@epa.gov>

**Cc:** McCabe, Erin < mccabe.erin@epa.gov>; Williams, Antony < Williams.Antony@epa.gov>; Patlewicz, Grace

<<u>Patlewicz.Grace@epa.gov</u>>; Lloyd, Tyler <<u>Lloyd.Tyler@epa.gov</u>> **Subject:** RE: EPA ORD-MPART Call on PFAS Destruction (Feb. 25)

Hi all,

In case this is helpful as you gather information for your call, there is a definition for long-chain perfluoroalkyl carboxylate (LCPFAC) chemicals in the recent TSCA SNUR:

 $\frac{https://www.federalregister.gov/documents/2020/07/27/2020-13738/long-chain-perfluoroalkyl-carboxylate-and-perfluoroalkyl-sulfonate-chemical-substances-significant}$ 

Here is the chemical structure definition used:

- b) Chemical substances and significant new uses subject to reporting. (1) The chemical substances identified in this paragraph, where 5 < n < 21 or 6 < m < 21, are subject to reporting under this section for the significant new uses described in paragraph (b)(4)(i) and (b)(4)(iv) of this section.
- (i) CF<sub>3</sub> (CF<sub>2</sub>)<sub>n</sub>-COO M where M = H<sup>+</sup> or any other group where a formal dissociation can be made;

- (ii)  $CF_3$  ( $CF_2$ )<sub>n</sub>- $CH=CH_2$ ;
- (iii)  $CF_3$  ( $CF_2$ )<sub>n</sub>-C(=O)-X, where X is any chemical moiety;
- (iv) CF<sub>3</sub> (CF<sub>2</sub>)<sub>m</sub>-CH<sub>2</sub>-X, where X is any chemical moiety; and
- (v)  $CF_3$  ( $CF_2$ )<sub>m</sub>-Y-X, where Y = non-S, non-N heteroatom and where X is any chemical moiety.

Other offices may have additional information to share regarding PFAS definitions.

Best regards, Laura

Laura Nazef
International Coordinator
Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
+1 (202) 564-7523
nazef.laura@epa.gov

From: Richard, Ann < Richard. Ann@epa.gov > Sent: Wednesday, February 10, 2021 1:17 PM

To: Matthews, Lisa < Matthews.Lisa@epa.gov >; Mills, Marc < mills.marc@epa.gov >

Cc: McCabe, Erin <mccabe.erin@epa.gov>; Williams, Antony <Williams.Antony@epa.gov>; Nazef, Laura

< Nazef. Laura@epa.gov >; Patlewicz, Grace < Patlewicz. Grace@epa.gov >

Subject: RE: EPA ORD-MPART Call on PFAS Destruction (Feb. 25)

## Hi Lisa,

I and my colleagues (Tony Williams and Grace Patlewicz) have been involved in reviewing an OECD document on the topic of PFAS terminology, as well as responding to some queries from Laura Nazef (OCSPP) on PFAS definitions for other EU regulatory efforts. Tony has also had conversations with groups across EPA to develop an "encompassing" structural filter definition that we use on the CompTox Chemicals Dashboard to define our "PFAS Master List". As you might guess, there is no single PFAS definition, but rather the chemical class tends to be defined to suit the needs (and concerns) of the various interested parties. Grace and I are happy to help however we can, but recommend that Tony and Laura might be the best persons to inform your discussions with MPART.

Thanks,

Ann

Ann M Richard, PhD
Research Chemist
Mail Drop D143-02
Center for Computational Toxicology & Exposure (CCTE)
Computational Chemistry & Cheminformatics Branch
Office of Research & Development
US Environmental Protection Agency
Research Triangle Park, NC 27711

tel: 919-541-3934

email: <u>richard.ann@epa.gov</u> office: EPA Main Facility, Rm D131C

<><><><><><><><><><><><><><>

From: Matthews, Lisa < Matthews.Lisa@epa.gov>

Sent: Tuesday, February 9, 2021 1:49 PM

To: Richard, Ann < Richard. Ann@epa.gov >; Mills, Marc < mills.marc@epa.gov >

Cc: McCabe, Erin < mccabe.erin@epa.gov>

Subject: EPA ORD-MPART Call on PFAS Destruction (Feb. 25)

Hi Ann and Marc,

Hope all is well with both of you. ORD has been having regular calls with the Michigan PFAS Action Response Team (MPART) since last year to discuss PFAS destruction research.

Our next call is coming up on February 25 from 10-11 AM ET. One of the topics MPART would like EPA to cover is how EPA programs are defining PFAS (see below). Would you be able to talk about this on our call?

Thanks, and please let me know if you have any questions. We'll be working to finalize the call agenda by the middle of next week.

Lisa

From: Rodan, Bruce < rodan.bruce@epa.gov > Sent: Tuesday, February 9, 2021 1:33 PM

**To:** Burden, Susan < <u>Burden.Susan@epa.gov</u>>; Matthews, Lisa < <u>Matthews.Lisa@epa.gov</u>> **Subject:** RE: Call for Agenda topics: Feb. 25 EPA ORD-MPART-ORD Call on PFAS Destruction

Lisa,

There have been some debates about defining PFAS – very minutia. Ann Richards in CCTE will know, and Marc Mills worked on a recent manuscript that we back and forth over the OECD definition.

Dr. Bruce Rodan Associate Director for Science EPA Office of Research and Development

From: Burden, Susan <<u>Burden.Susan@epa.gov</u>>
Sent: Tuesday, February 9, 2021 12:37 PM
To: Matthews, Lisa <<u>Matthews.Lisa@epa.gov</u>>
Cc: Rodan, Bruce <rodan.bruce@epa.gov>

Subject: RE: Call for Agenda topics: Feb. 25 EPA ORD-MPART-ORD Call on PFAS Destruction

Hi Lisa,

Carlos Pachon is the lead in OLEM for the destruction and disposal guidance, so he would be the person to reach out to for the MPART call.

As far as EPA programs defining PFAS, I'm not aware of any EPA programs that have had to define PFAS "at the organic chemistry level" (i.e., not by CASRNs). I don't know that any of EPA's programs would have much to say about this issue at this point in time.

Thanks,

Susan

Susan Burden, Ph.D.
Scientific Support Advisor & ORD PFAS Executive Lead
Office of Science Advisor, Policy and Engagement
Office of Research and Development
US Environmental Protection Agency

Phone: (202) 564-6308 | (202) 740-0169 Email: burden.susan@epa.gov

From: Matthews, Lisa < Matthews.Lisa@epa.gov > Sent: Tuesday, February 09, 2021 12:12 PM
To: Burden, Susan < Burden.Susan@epa.gov > Cc: Rodan, Bruce < rodan.bruce@epa.gov >

Subject: FW: Call for Agenda topics: Feb. 25 EPA ORD-MPART-ORD Call on PFAS Destruction

Hi Susan,

Is the interim destruction guidance from OLEM? Who is point person in OLEM for this issue that we could invite to join the call with MPART?

Also thoughts on how EPA programs are defining PFAS?

Thanks, Lisa

From: Sliver, Steve (EGLE) <SLIVERS@michigan.gov>

Sent: Tuesday, February 9, 2021 7:51 AM

To: Phelps, Lara < <a href="mailto:Phelps.Lara@epa.gov">Phelps.Lara@epa.gov</a>; Watkins, Tim

<<u>Watkins.Tim@epa.gov</u>>; Speth, Thomas <<u>Speth.Thomas@epa.gov</u>>

Cc: Zambrana, Jose < Zambrana.Jose@epa.gov>; Mattas-Curry, Lahne < Mattas-Curry.Lahne@epa.gov>; McCabe, Erin

<mccabe.erin@epa.gov>; taylorj1@michigan.gov

Subject: RE: Call for Agenda topics: Feb. 25 EPA ORD-MPART-ORD Call on PFAS Destruction

Good morning Lisa,

In addition, would it be possible for someone from EPA to cover next steps with the interim destruction guidance, especially the request for additional field testing and implementation of the interim storage option?

Following up on Joy's presentation of our working description of PFAS last time, we are also interested in how EPA is defining PFAS in its various programs (at the organic chemistry level), understanding that different EPA programs may define PFAS differently. Attached is a paper that provides additional detail on a description; MPART is currently evaluating this paper and determining its implications to the current working description.

Thanks!

Steve

From: Phelps, Lara < Phelps.Lara@epa.gov > Sent: Monday, February 1, 2021 2:00 PM

**To:** Matthews, Lisa < <u>Matthews.Lisa@epa.gov</u>>; Sliver, Steve (EGLE) < <u>SLIVERS@michigan.gov</u>>; Watkins, Tim

<<u>Watkins.Tim@epa.gov</u>>; Speth, Thomas <<u>Speth.Thomas@epa.gov</u>>

Cc: Zambrana, Jose <Zambrana.Jose@epa.gov>; Mattas-Curry, Lahne <Mattas-Curry.Lahne@epa.gov>; McCabe, Erin

Subject: RE: Call for Agenda topics: Feb. 25 EPA ORD-MPART-ORD Call on PFAS Destruction

# CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Hi Lisa -

The two immediate things that come to mind to mention are the AWMA IT3 Paper presented last week - Combustion of C1 and C2 PFAS: Kinetic Modeling and Experiments; and Other Test Method (OTM) – 45, which we will be talking to the larger ECOS community the week before, if there were some additional follow-up.

Thanks!

Lara

\_\_\_\_\_\_

# Lara P. Phelps, Director

Center for Environmental Measurement and Modeling, Air Methods & Characterization Division U. S. Environmental Protection Agency, Office of Research and Development

109 T.W. Alexander Drive (E343-04), Research Triangle Park, NC 27711 Office: 919-541-5544 | Cell: 984-287-0594 | Email: phelps.lara@epa.gov

"Protecting human health and the environment by delivering innovative measurement and modeling solutions to EPA and its partners."

From: Matthews, Lisa < Matthews.Lisa@epa.gov>

Sent: Monday, February 01, 2021 11:59 AM

**To:** <u>slivers@michigan.gov</u>; Watkins, Tim < <u>Watkins.Tim@epa.gov</u>>; Phelps, Lara < <u>Phelps.Lara@epa.gov</u>>; Speth, Thomas < Speth.Thomas@epa.gov>

**Cc:** Zambrana, Jose <<u>Zambrana.Jose@epa.gov</u>>; Mattas-Curry, Lahne <<u>Mattas-Curry.Lahne@epa.gov</u>>; McCabe, Erin <mccabe.erin@epa.gov>

Subject: Call for Agenda topics: Feb. 25 EPA ORD-MPART-ORD Call on PFAS Destruction

### Good morning,

We have our EPA ORD-MPART quarterly call on PFAS destruction research coming up on Thursday, February 25 from 10-11 AM ET.

Please send <u>Erin McCabe</u> and me your suggestions for agenda topics by **Monday, February 8** – including any new information to share with the group.

Agenda topics from past calls are listed below:

### <u>November 18, 2020</u>

- MPART Working PFAS Description Joy Taylor Morgan, Michigan EGLE Air Quality Division's Toxics Unit
- 6:2 FTS (fluorotelomer sulfonate) Screening Level for Air Mike Depa, Michigan EGLE, Air Quality Division's Toxics Unit
- EPA ORD Research Updates Tim Watkins, Director, Center for Environmental Measurement and Modeling, EPA
   ORD

## August 26, 2020

Treating PFAS water contamination with cold plasma – Curt Wolf, University of Michigan

- Thermal oxidizer design installed at the Chemours Fayetteville Works facility in NC Chun-Wai Lee and Bill Linak,
   EPA ORD
- Australia cement kiln data for destruction of PFAS Chun-Wai Lee and Bill Linak, EPA ORD
- Pilot scale testing on Rainbow Furnace Chun-Wai Lee and Bill Linak, EPA ORD

# June 25, 2020 follow-up call

- Participation in EPA's multi-lab study on a drinking water analytical method with isotope dilution (ultimately a DOD decision)
- Flexibility in drinking water analytical methods for residential wells
  - EPA will continue to only stand behind Methods 537 and 522, MPART can use other methods, but EPA can't comment on the validity of the data

## May 28, 2020

- Bench-Scale Tests on Stabilization/Solidification of PFAS-Contaminated Soils and Biosolids Dan Cassidy,
   Western Michigan University
- Update on EPA's PFAS Innovative Treatment Team Brian Gullett, EPA ORD
- Managing PFAS in Spent Adsorption Media Craig Patterson, Tom Speth and Marc Mills, EPA ORD

# March 23, 2020

 ORD researchers discussed current and planned EPA PFAS research with the MPART. They are interested in EPA's PFAS destruction research and decontamination efforts, particularly for fire departments that have used AFFF. ORD provided overview of our PFAS thermal destruction research.

Thank you! Lisa

### Lisa Matthews

Senior Advisor and State Liaison US EPA Office of Research and Development 202-564-6669 (desk) | 202-577-4035 (cell) matthews.lisa@epa.gov

Learn about EPA Research to support States at www.epa.gov/research-states.